

STANDARDS FOR THE DEVELOPMENT OF TRAINING PROGRAMS FOR MEETING THE IDAHO TRANSPORTATION DEPARTMENT (ITD) TRAINING SPECIAL PROVISIONS REQUIREMENT

Purpose

These standards have been developed to promote equal opportunity by ensuring that the training of minorities, women and disadvantaged persons provides the skills needed to work successfully in the highway construction industry.

Definitions

Certificate of Completion: Certificate provided by the contractor to the trainee at the end of the training program showing that the program has been completed.

Journeyman: An achieved level of competency as recognized within the industry. Use of the term may also refer to a mentor, technician, specialist or other skilled worker or; an individual who has documented sufficient skills and knowledge of a trade, craft or occupation, either through formal training or through practical on-the-job experience. This individual is recognized by the contractor as being fully qualified to perform the work of the trade, craft or occupation.

Supervisor of Trainee: Individual designated by the contractor to supervise or have charge and direction of the trainee and training program.

On-The-Job Trainee Agreement Form: ITD-2777 form, submittal to Resident/Regional Engineer is required prior to trainee's employment start date on ITD project.

Trainee: Individual employed by the contractor meeting the qualifications described in the approved training program who has signed the On-The-Job Training Agreement form with the contractor providing the training and related instruction.

Trainee Monthly Progress Record: ITD-2776 form, submittal to Resident/Regional Engineer is required monthly to show training obtained.

Training Action Request: ITD-2775 form, submittal to Resident/Regional Engineer is required at either training program completion or termination of trainee.

Training Program: A program that meets the Training Program Standards identified in this document. All training programs must be submitted to the Resident/Regional Engineer and pre-approved by the ITD EEO Office and Federal Highway Administration prior to the start of training.

Training Program Standards: Includes this document and all appendices and attachments, and any future modifications or additions approved by ITD.

Section I – Supervision of Training Program

The contractor will designate an individual within the company, as the Supervisor of Trainees, to be in complete charge of the trainee training program. This individual will approve all trainees; monitor the training of the trainees; see that these Standards are adhered to; and maintain responsibility for all other things necessary to reasonably run the program. This individual may delegate such duties as they deemed necessary and advisable.

In addition, trainees will not be allowed to work without journeyman supervision.

Section II - Qualifications for Trainees

The contractor will establish minimum qualifications based on the specific requirements of the occupational area of the training:

- Age: Employer will establish a minimum age qualification based on bona fide occupational requirements. Example; Trainee must not be less than 18 years of age.
- Education: Employer will establish minimum education qualifications based on bona fide occupational requirements. Example; Trainee must be high school graduate or have GED equivalency.
- Physical: Applicants will be physically capable of performing the essential functions of the training program, with or without a reasonable accommodation, and without posing a direct threat to the health and safety of the individual or others. Trainee applicants may be subject to screening for use of illegal drugs on acceptance into the program and prior to being employed.

Section III – Selection of Trainees

All trainee applicants shall be approved by the company Supervisor of Trainees.

Selection of trainees will be conducted without regard to race, color, religion, sex, national origin, age, and will be based on non-discriminatory selection criteria.

Except for a bona fide minimum age requirement for employment, there will be no restriction on any trainee, or the approval thereof, because of age.

There shall be no restriction on any trainee, or the approval thereof, because of the lack of formal schooling unless that restriction is due to a bona fide occupational requirement.

Consistent with proper supervision, training, safety, and continuity of employment throughout the training, the ratio of trainees to journeymen is established at the following: One (1) journeyman to one (1) trainee; two (2) journeymen to (2) trainees; and one (1) additional trainee employed thereafter for each three (3) journeymen employed at the job site. The Supervisor of Trainees may waive this ratio for reasonable temporary reasons upon written request to the Resident Engineer and approval by the ITD EEO Contract Compliance Officer.

Section IV – On-the-Job Training Agreement

Once a trainee is selected, and before employment can start, the trainee and the contractor must develop an On-the-Job Training Agreement (ITD-2777). This written agreement once signed by the contractor and trainee is submitted to ITD with a copy of the approved training program. A copy of this documentation is also required to be provided to the trainee. Once this is approved by ITD then the trainee's hours can count towards the Training Special Provisions of the contract.

Section V – Development of Training Program

The training program must be an organized, written plan including the terms and conditions of employment, training, and supervision of one or more trainees.

The training program must include an Equal Opportunity pledge and an Affirmative Action plan in accordance with Title 23 Code of Federal Regulations Part 230 Subpart A Appendix B.

The training program must include at a minimum not less than the amount of hours identified within the work processes as established by ITD for the craft identified and must be consistent with the training requirements as established by industry practice.

An outline of the actual training that the trainee will receive must be provided and be consistent with the work processes established by ITD for the training craft.

Section VI – Related Instruction

Provisions for organized, related and supplemental instruction in technical subjects related to the trade must be provided. A minimum of 144 hours for each year of training is required. Such instruction may be given in a classroom or by correspondence courses of equivalent value in an industry recognized curriculum. This training shall include but not be limited to work practices, reading plans specifications, books or manuals as applicable, and care and use of equipment and tools.

Section VII – Safety and Health

All trainees will receive instruction in safe and healthful work practices both on-the-job and in related instruction that are in compliance with the Federal Occupational Safety and Health Standards or State standards that have been found to be at least as effective as the Federal standards.

Section VIII – Credit for Previous Experience

Credit for previous experience or training cannot exceed fifty (50) percent of the total training hours for the particular category of training. Trainees transferring from an approved trainee/apprentice program may be given credit on a one to one basis of hours from the program they are transferring from. (Credit will be given on approval by the Resident/Regional Engineer)

Advancement during the training program will be based upon hours worked and completion of additional instruction as stated above, providing the trainee is progressing satisfactorily.

Section IX – Hours of Work

The trainees will be employed under the supervision of a competent journeyman at all times, and the hours of work and other conditions shall be the same as for journeymen within the contractor's workforce doing comparable work. No trainee will be allowed to work overtime if it interferes with attendance in related instruction classes.

Section X – Wage Progression

Trainees will be paid at least sixty (60) percent of the minimum journeyman's rate specified in the contract upon which the trainee is employed for the first quarter of the training period, at least seventy (70) percent for the second quarter of the training period, at least eighty (80) percent during the third quarter, and at least ninety (90) percent for the last quarter of the training period.

Any credited hours given for past experience or training shall apply against those hours in the first half of the training period.

Section XI – Supervision of the Trainee

Trainees will be under the general supervision of the contractor and under the direct supervision of the journeyman to whom they are assigned. The Supervisor of Trainees designated by the contractor will be responsible for the trainee's work assignments, ensure the trainee is working under the supervision of a skilled journeyman, evaluation of work performance, and completion and submittal of progress reports to ITD.

Section XII – Records and Examinations

The trainee will maintain a record of each work experience/training on the job and in related instruction. This information will be provided to the trainee's supervisor each month. The Supervisor of Trainees will record all data and provide information to ITD as required on form ITD-2776.

Prior to advancement or when conditions warrant the Supervisor of Trainees will evaluate the trainee's record to determine if satisfactory progress has been made. Based on this evaluation the trainee will be advanced or required to repeat a process or series of processes.

If it is found that the trainee does not have the ability or desire to continue the training to become a journeyman, and the contractor has provided for adequate assistance and opportunity for the trainee, the contractor may terminate the trainee agreement. This action will be documented on form ITD-2775 and submitted to the Resident/Regional Engineer. This action will be documented on form ITD-2775 and submitted to the Resident/Regional Engineer.

Section XIII – Maintenance of Records

All records must be maintained for a period of 3 years once the contract is completed.

Section XIV – Certificate of Completion

Upon satisfactory completion of the training program established by these standards, the trainee shall be given a certificate showing the type and length of training completed. A copy of this certificate and an ITD-2775 form shall be provided to ITD.

If the trainee leaves the contractor's workforce prior to completion of the training program a certificate stating the progress obtained will be provided to the trainee. A copy of this certificate and an ITD-2775 form shall be provided to ITD.

Section XV – Approval of Training Program

Training Programs developed under these standards will include a signature page for approval of the training program. This page will include signature lines for the Contractor, ITD Resident/Regional Engineer, ITD EEO Contract Compliance Officer, and Federal Highway Administration Representative.

WORK PROCESSES – CARPENTER

This instruction and experience shall include one or more of the following operations but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Foundations, walls, and floors1500
 - a. Laying out and leveling
 - b. Building and placing straight concrete forms
 - c. Lining up and bracing concrete walls and columns
 - d. Laying out footings
 - e. Building irregular concrete forms
 - f. Building forms for concrete stairways
 - g. Laying out building lines
 - h. Safety
2. Framing (foundations and walls)800
 - a. Laying out and framing sills and girders
 - b. Framing and setting floor joists
 - c. Erecting walls and partitions
 - d. Lining up and bracing walls and partitions
 - e. Installing sheathing and plaster grounds
 - f. Building staging
 - g. Laying out walls and partitions
 - h. Safety
3. Roofs800
 - a. Framing and setting common rafters
 - b. Framing and setting valley rafters
 - c. Framing and setting hip rafters
 - d. Framing and setting jack rafters
 - e. Applying sheathing, composition shingles, and other types of roof coverings
 - f. Safety
4. Exterior mill work1000
 - a. Determining use of tools, materials, and equipment
 - b. Operating skill saw, electric drill, and sander
 - c. Setting up and operating bench saw
 - d. Safety
5. Interior wall coverings500
 - a. Applying wood coverings
 - b. Applying composition, sheet rock, or fiberboard
 - c. Installing baseboards
 - d. Safety

6. Floors	500
a. Laying sub floors	
b. Laying hardwood floors	
c. Erecting forms for concrete	
d. Safety	
7. Stairs	500
a. Laying out and cutting stair horse for various types of stairways	
b. Laying out and cutting various threads	
c. Installing railings	
d. Safety	
8. Interior finish	1000
a. Cutting and fitting base	
b. Cutting and fitting molding	
c. Setting doorjambs	
d. Fitting and hanging windows	
e. Fitting and fastening hardware	
f. Fitting and hanging doors	
g. Safety	
9. Miscellaneous	1400
a. Building walkways	
b. Erecting scaffolding	
c. Making temporary sheds	
d. Making miscellaneous repairs and additions	
e. Erecting miscellaneous types of concrete forms	
f. Welding	
g. Rigging and signaling	
h. Safety	

TOTAL HOURS 8000

WORK PROCESSES – CEMENT MASON

This instruction and experience shall include one or more of the following operations but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Safety and good work habits	80
2. Learning to set screeds and layout work	700
3. Learning proper mix and consistency	500
4. Pouring and tamping concrete	300
5. Using vibrating machine	240
6. Rough finishing, hand or machine, floating	500
7. Floating hand troweling to smooth finish	1000
8. Patching, hand rubbing	200
9. Marking and edging	400
10. Protecting newly poured and laid concrete from weather, rain, sun, and wind	800

TOTAL HOURS 4000

WORK PROCESSES – CONSTRUCTION EQUIPMENT MECHANIC

This instruction and experience shall include one or more of the following operations but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Parts department	400
a. Identification of repair parts and replacing of stock	
b. Repair parts ordering	
c. Proper use of parts manual	
d. Safety	
2. Basic care and maintenance (in accordance with operators manual and within manufactures specifications)	250
a. Lubrication	
b. Cleaning	
c. Periodic maintenance	
3. Brakes (all types)	200
a. Air systems	
b. Hydraulic systems	
c. Mechanical systems	
4. Clutches and converters	350
a. Wet clutches	
b. Dry clutches	
c. Single state converters	
d. Multistage converters	
5. Transmissions	400
a. Automatic	
b. Hydrostatic	
c. Standard	
6. Final drives	250
a. Differential	
b. Planetary	
7. Steering mechanisms	150
a. Manual	
b. Power assisted	
c. Power	

8. Power control units	250
a. Electrical	
b. Air	
c. Hydraulic	
9. Winches	100
10. Hydraulic systems	400
a. Hoses	
b. Cylinders	
c. Pumps	
d. Valves	
11. Electrical systems	450
a. Starting	
b. Generating	
c. Lighting	
d. Ignition	
12. Engine fuel systems	350
a. Carburetor	
b. Injection	
13. Cooling systems	100
a. Radiator	
b. Heat exchanger	
c. Hydraulic	
d. Air	
14. Engine maintenance, repair, and rebuild	2800
a. Gas	
b. Diesel	
c. Two cycle	
d. Four cycle	
15. Welding	150
a. Electrical	
b. Gas	
16. Field maintenance, general	1400

TOTAL HOURS 8000

WORK PROCESSES – HEAVY TRUCK DRIVER

This instruction and experience shall include one or more of the following operations but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Heavy truck engine maintenance400
 - a. Pre and Post operation maintenance
2. Heavy truck drive train maintenance400
 - a. Drive train theory
 - b. Drive train operation
3. Loading and unloading heavy trucks400
 - a. Cargo handling
4. Heavy truck tire care200
5. Heavy truck operations1600
 - a. Orientation to trucking
 - b. Terminology
 - c. Basic road skills
 - d. Maneuvering and handling
 - e. Proper truck backing
 - f. Hook up
 - g. Turning
 - h. Shifting
 - i. Weather conditions
 - j. Traffic conditions

TOTAL HOURS 3000

WORK PROCESSES – IRONWORKER

This instruction and experience shall include the following operations but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Tools	175
a. Name and proper use	
b. Care	
c. Safety	
2. Materials	250
a. Identification	
b. Shapes	
3. Equipment – ornamental, reinforcing, structural	400
a. Light equipment – blocks, ropes, etc.	
b. Heavy equipment – derricks, etc.	
4. Erecting – job, erecting equipment	2000
a. Layout	
b. Drilling	
c. Welding – acetylene and electric	
• Cutting	
• Burning	
d. Riveting	
• Selection of proper size and types of rivets	
• Heating rivets	
• Use and care of tools	
5. Dismantling, rigging equipment, scaffolding, floats	100
6. Ornamental, reinforcing, structural	375
a. Sorting materials	
b. Distributing	
7. Placing, spacing, tying	500
8. Ornamental layout and fabrication	300
a. Stairs and door bucks	
b. Hand railings and sash	
c. Metal partitions	

9. Hoisting	400
a. Hook on	
b. Learn signals	
c. Learn safety factors	
10. Fitting-up, plumbing-up	300
a. Use of cables and turnbuckles	
b. Use of instruments	
c. Use of hydraulic jacks	
11. Fabricating	800
a. Layout	
b. Fit-up	
12. Reading job plans and specifications	400

TOTAL HOURS 6000

WORK PROCESSES – LABORER

This instruction and experience shall include the following operations but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Site/Project Preparation and Maintenance 600
 - a. Clearing bucking and falling
 - b. Transportation, dismantling and stockpiling of scaffolding and work platforms
 - c. Grading and compaction
 - d. Layout and staking protocols
 - e. Rigging and signaling for work traditionally done by construction craft laborers
 - f. Site preparation, clean up and security
2. Tools, Equipment and Materials500
 - a. Recognition and preparation
 - b. Hand, electric, gas, pneumatic and power tool equipment use and maintenance
 - c. Material storage and security
3. Safety500
 - a. Confined space safety
 - b. Flagging, signaling and traffic safety awareness
 - c. Hazard material recognition
 - d. Trenching and site excavation safety
4. Environmental Remediation800
 - a. Asbestos abatement, hazardous waste abatement, lead abatement, and petro-chemical abatement
 - b. Radiation and radiation remediation
5. Building Construction800
 - a. Concrete – tending, placement and removal
 - b. Landscaping
 - c. Mason/Plasterer tending
 - d. Pipe Laying
6. Heavy/Highway Construction800
 - a. Asphalt, drilling and blasting
 - b. Pipe laying for work traditionally performed by construction craft laborers
 - c. Tunnel and shaft
 - d. Concrete – tending, placement and removal
 - e. Bridges

TOTAL HOURS 4000

WORK PROCESSES – OPERATING ENGINEER

This instruction and experience shall include one or more of the following operations. Time spent on specific operations need not be continuous.

1. Graders750
 - a. Check, read, set grade stakes and read plans
 - b. Service, maintain, and adjust machine
 - c. Types of work, such as find grading, black sloping, mixing and laying oil, etc.
 - d. Operate and maintain elevating graders
 - e. Make adjustments and minor repairs with the heavy-duty repairer and welder
2. Scrapers, self-propelled750
 - a. Operate various types of motor and motor-electric driven machines
 - b. Make proper cuts and fills to the grade stakes
 - c. Service, maintain, and repair different makes of machines
3. Rollers, flat wheel, sheep foot, and pneumatic, and other type compacting machines ..600
 - a. Purpose of the different machines
 - b. Different procedures for compaction
 - c. Operation and care of different types of rollers and other compaction equipment
4. Tractor-type skin loaders and hi-lift 300
 - a. Operate the various types
 - b. Service
 - c. Minor repairs and adjustments
5. Wheel-type tractors, including forklifts, lumber carriers, etc.300
 - a. Service
 - b. Maintenance
 - c. Minor repairs and adjustments
6. Trenching machines300
 - a. Read grade stakes and cut trench to grades
 - b. Operate various types and sizes of machines
 - c. Maintenance and repair of various types and sized of machines
7. Bulldozer and electric-propelled dozers450
 - a. Pioneer and rough excavation to finish work
 - b. Read grade stakes
 - c. Minor adjustments and repairs
 - d. Work with mechanic on major repairs
 - e. Operation, service, and adjustment of auxiliary equipment, such as tractor crane, side boom, pipeline equipment, etc.

8. Scraper, towed	350
a. Operation	
b. Service, adjust, and change cables on cable-controlled machines	
c. Read grade stakes for cuts and fills	
9. General equipment	500
a. Operate, service, and adjust all types of pumps	
b. Operation and maintenance of pumping machines, such as pump crete machine, concrete pump, gunite machine, etc.	
c. Installation, operation, and maintenance of well point systems	
d. Operate, service, and adjust all types of mechanical heaters	
e. Operate, service, and adjust all types of electrical generating plants	
f. Operate, service, and adjust all types of air compressors and use and operation of auxiliary equipment	
g. Safety	
10. Concrete, stone, and asphalt spreaders, screed and finishing machines	450
a. Service	
b. Minor repairs and adjustments	
c. Operate machines	
11. Concrete mixer-paver	400
a. Operate and become familiar with control of mixing time apparatus	
b. Make adjustments and repairs to service machine	
12. Specialty paving equipment	450
a. Operate gutter pavers, curb pavers, vibrators, concrete saws, pavement breakers, and similar-type equipment	
b. Service, and adjust gutter pavers, curb pavers, vibrators, concrete saws, pavement breakers, and similar-type equipment	
13. Maintenance, cutting and burning, grease and oils	400
a. Welders and welding equipment	
b. Minor repairs and adjustments	
c. Minor welding repair and cutting	
d. Types of greases and oils and their use	

TOTAL HOURS 6000

WORK PROCESSES – PILEDRIIVER

This instruction and experience shall include one or more of the following operations but not necessarily in the listed sequence. Time spent on specific operations need not be continuous.

1. Tool and Materials	200
2. Layout	300
3. Piledriving equipment-hammers, leads and rigging, motors and pumps	500
4. Riggins and signaling.....	400
5. Driving of piles-wood, concrete, steel, etc.	1000
6. Coffor dams and caissons.....	300
7. Bridge, dock and wharf construction	800
8. Heavy timber construction	400
9. Care and maintenance of tools and equipment	400
10. Form building	1100
11. Rough framing	1100
12. Welding.....	500
13. Diving and diver tending	500
14. Miscellaneous – safety, scaffolding, shoring, etc.	500

TOTAL HOURS 8000